

REMARKS

Initially, the undersigned would like to thank the Examiner for the courtesy of granting the Applicants an interview. During a telephone interview with the Examiner on April 21, 2006, the Applicants distinguished the claimed subject matter over the applied prior art, *i.e.*, focusing primarily on the REGISTER *et al.* and the ALAM *et al.* patents. The Applicants asserted that the Examiner had not established a *prima facie* case of obviousness for at least two reasons. First, the Applicants pointed out that the text classification system of REGISTER *et al.* was not combinable with the router in ALAM *et al.* Second, the Applicants pointed out that the REGISTER *et al.* system, taken alone or in combination with any of the cited prior art, fails teach the automatic switch over between a classification and learning mode as claimed in the application. The Examiner agreed to reconsider his rejection upon receiving Applicant's formal response.

Upon entry of the present Reply, claims 1-4 and 9-17 will be pending. Claims 1 and 17 will have been amended to more clearly define the invention by substantially incorporating the claimed subject matter of original claims 8 and 18. Claims 8 and 18 will have been cancelled without prejudice or disclaimer. And, claim 9 will have been amended to correct minor informalities while not affecting the scope of the claimed subject matter. In view of the herein-contained amendments and remarks, Applicants respectfully submit that each of the claims now pending is allowable.

In the Final Office Action mailed February 6, 2006, the Examiner rejected claims 1-4 and 8-18 under 35 U.S.C. §103 as being unpatentable over six references, *i.e.* three U.S. Patents and three articles. The Examiner rejected the claims as being

unpatentable over the combination of REGISTER *et al.* (U.S. Patent No. 5,371,807) in view of ALAM *et al.* (U.S. Patent No. 6,104,500), and further in view of TAN (article, "Adaptive Resonance Associative Map," Neural Networks Vol. 8, No. 3) and further in view of WITEK (U.S. Patent No. 5,461,488) and further in view of KANNAN (article, "A Hybrid Architecture for Text Classification," Nov. 1992, Proc. Of the 1992 IEEE Intl. Conf. On Tools with AI 1992) and TAN *et al.* (article, "Learning User Profiles for Personalized Information Dissemination," IEEE World Congress on Computational Intelligence, the 1998 IEEE International Joint Conference on Volume 1, 4-9 May 1998). Applicants respectfully traverse the rejections for at least the following reasons.

Initially, the Applicants note that although rejection of claims 1-4 and 8-18 was made as a single over-arching rejection under § 103, relying on the above noted six references, a review of the Office Action appears to indicate that the Examiner did not rely on all of the references in addressing the various claims. For example, it appears from the Office Action that claims 1 and 17 were rejected relying on the REGISTER *et al.* and ALAM *et al.* patents alone. The Applicants' respectfully request clarification of the grounds for rejection on Applicants' claims 1-4 and 8-17 (claim 18 having been canceled by this Reply).

The undersigned notes that to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The

teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Furthermore, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art. "The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000). See also *In re Lee*, 277 F.3d 1338, 1342-44, 61 USPQ2d 1430, 1433-34 (Fed. Cir. 2002) (discussing the importance of relying on objective evidence and making specific factual findings with respect to the motivation to combine references); *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, as noted above, obviousness has not been established.

Initially, to clarify the record, the undersigned notes that even though claims 1, 8-12 and 16-17 (claim 18 having been canceled by this Reply without prejudice or disclaimer) have been rejected over the proposed combination of REGISTER *et al.*, ALAM *et al.*, TAN, WITEK, KANNAN and TAN *et al.*, the Examiner addressed these claims referring only to the REGISTER *et al.* and ALAM *et al.* patents. Furthermore, the Examiner addressed claims 2-4 relying only on REGISTER *et al.*, ALAM *et al.* and TAN; claim 13 relying on REGISTER *et al.*, ALAM *et al.*, TAN and WITEK; claim 14

relying on REGISTER *et al.*, ALAM *et al.*, TAN, WITEK and KANNAN; claim 15 relying on REGISTER *et al.*, ALAM *et al.*, TAN, WITEK, KANNAN and TAN *et al.* , and claims Applicants submit that there would have been no motivation to combine REGISTER *et al.* and ALAM *et al.*, much less, REGISTER *et al.*, ALAM *et al.*, TAN, WITEK, KANNAN and TAN *et al.* as proposed by the Examiner in the above noted Official Action.

REGISTER *et al.* teach a text classification core structure to be used with external applications. See, e.g., column 2, lines 17-19. Referring to Figure 2, for example, the system takes natural language input text (*i.e.*, module 32), parses it into a first list of recognized keywords, then uses the first list to deduce further facts from the natural language input text. The system then compiles the deduced facts into a second list (*i.e.*, module 34). Then, using the first list, REGISTER *et al.* calculate a numeric similarity score for each one of a plurality of categories, indicating how similar one of the plurality of categories is to the recognized keywords in the first list. The system then applies a dynamic threshold to the similarity scores to determine the most similar categories to the recognized keywords of the natural language input text (*i.e.*, module 36). The output from the Similarity Measuring Module 36 is a third list, which includes the plural categories that are measured to be most similar to the input keywords. Finally, **"the first, second and third lists can be passed to the external application for application specific processing"** [emphasis added]. See column 2, lines 38 to 51 of REGISTER *et al.*

ALAM *et al.* teach a network fax routing via email system. This reference teaches an automated routing system that accepts input facsimiles, extracts address information using OCR technology, generates a probable addressee and routes the

input facsimile via email to the addressee. See, e.g., column 5, line 59 to column 6, line 10. ALAM *et al.*'s router 44 (e.g., Figures 3 and 5) uses a single address to route the facsimile to an intended recipient. If, however, the system is unable to find a match, it forwards the facsimile to a human operator to manually route the facsimile document. See, e.g., column 10, lines 26 to 40 for example.

The Examiner posits, *i.e.*, in the above noted Official Action, that it would have been obvious to "modify the teachings of Register by using the router [of ALAM *et al.*] to compare confidence values (likelihood) with thresholds and if no results were found to move to a manual route practice as taught by ALAM to have a router arranged to route the document to one of a plurality of destinations..." See page 4 of the above noted Official Action. The undersigned submit that this motivation is guided by hindsight and not what the references teach or suggest to one of ordinary skill in the art.

The ordinary skilled artisan, if placed in the possession of the REGISTER *et al.* and ALAM *et al.* patents, for example, would readily recognize that the facsimile routing system of ALAM *et al.* (e.g., Figure 3), would serve as the external application 24 in REGISTER *et al.* As such, ALAM *et al.*'s router 44 would be provided with first, second and third lists (see, e.g., REGISTER *et al.*, column 2, line 55), instead of the single address that the router is designed for (see, e.g., ALAM *et al.*, column 10, lines 26-40). In other words, because ALAM *et al.*'s router works only when provided with a single destination, REGISTER *et al.*'s multiple list information would render the ALAM router non-functional and all routing would be done by a human operator. Thus, contrary to the Examiner's assertion, it would not have been obvious to combine the router of ALAM *et al.* with the classification system of REGISTER *et al.*

The Examiner's proposition that it would have been obvious to the person of ordinary skill in the art to modify the teachings of REGISTER *et al.* by using the router of ALAM *et al.* and moving to a manual routing practice when no results are found is found to be faulty. See, e.g., page 4 of the Final Office Action. This proposition is faulty because the Examiner is ignoring a gap in the shortcomings of the prior art patents. Namely, REGISTER *et al.* provide no teaching of a situation where no results are found when the comparison of the similarity scores with the threshold is made. In fact, contra distinguishingly, REGISTER *et al.* emphatically teach that a plurality of results are always found.

Furthermore, as explicitly recited, the claimed invention requires switching between learning and classification modes under user control and an ability to learn incrementally from each document that the system processes. On the other hand, REGISTER *et al.* and ALAM *et al.* focus on batch-based pattern storage and classification. For example, REGISTER *et al.* teach that the relevance feedback learning module is designed to run in batch form after collecting a number of service requests and classification over a period of time (see, e.g., column 15, lines 47-58, REGISTER *et al.*).

Although the Examiner has only relied on REGISTER *et al.* and ALAM *et al.* in addressing claims 1, 8-12 and 16-17 (claim 18 having been canceled by this Reply without prejudice or disclaimer), the undersigned submits that the other four references, *i.e.*, TAN, WITEK, KANNAN and TAN *et al.* proposed by the Examiner, and relied on in addressing dependent claims 2-4 and 13-15, in different combinations, also fail to teach or suggest, alone or in any combination, the claimed subject matter. Aside from the

deficiencies of REGISTER *et al.* and/or ALAM *et al.*, taken alone or in combination, these four additional references fail to teach or suggest the claimed subject matter. Thus, the Applicants respectfully request withdrawal of all rejections and allowance of all claims.

The Examiner introduced TAN for the first time in the Action when addressing claims 2-4. See, *e.g.*, page 5 of the Final Office Action. The undersigned submits that, aside from REGISTER *et al.* and ALAM *et al.* not being combinable, there was no motivation to combine TAN to the system(s) of REGISTER *et al.* and/or ALAM *et al.* Specifically, there is objective evidence to suggest modifying REGISTER *et al.* to include an ART system, much less a ARAM system.

Next, the Examiner introduced WITEK for the first time in the Action when addressing claim 13. WITEK appears to have been introduced to show that administrator workstations were known. See, *e.g.*, page 6 of the Final Office Action. Again, there is no motivation to combine these very different systems. REGISTER *et al.* teach a completely automated classification system that teaches away from manual routing, which a system administrator workstation (as proposed by the Examiner) would entail. Thus, Applicant respectfully requests withdrawal of all rejections and timely allowance of the patentable claims.

Regarding claims 14 and 15, as with claim 13 above, the Examiner has turned to KANNAN and TAN *et al.* and picked and chosen different features from these two systems in an effort to reject the claims of this application. These two references, aside from their own shortcomings, fail to cure the deficiencies (*e.g.*, discussed above) of the other references relied upon in the rejections of the Final Office Action. Thus,

Applicants respectfully request withdrawal and allowance of the claims of this application.

Thus, for at least the reasons discussed above, there would have been no motivation to combine REGISTER *et al.*, ALAM *et al.*, TAN, WITEK, KANNAN and TAN *et al.* as proposed by the Examiner.

More so, the Office Action has not demonstrated that there would be an expectation of success in combining the teachings of REGISTER *et al.*, ALAM *et al.*, TAN, WITEK, KANNAN and TAN *et al.* as demonstrated above by failure of ALAM *et al.*'s router to function with the system of REGISTER *et al.* Furthermore, the Office Action has not provided an example of how one of ordinary skill in the art would have combined the six systems to render a functional system that would meet all of Applicants' claimed subject matter.

Finally, the Office Action has not established the third requirement for a *prima facie* case of obviousness. Namely, the Office Action has not demonstrated that the combination of REGISTER *et al.*, ALAM *et al.*, TAN, WITEK, KANNAN and TAN *et al.*, even if it were possible, would disclose all of the claimed features. The Applicants submit that none of the references, taken alone or in combination, address all of the claimed subject matter. The posited combination of references does not teach or suggest, alone or in combination, the claimed router arranged to make an automatic or manual routing decision in dependence upon a comparison between a document classification confidence value and a threshold, in the context of the remaining claimed



subject matter.

In the “Response to Arguments” section of the above noted Final Office Action, the Examiner posits that the claimed confidence value is equivalent to the “similarity score” of REGISTER *et al.* or the “likelihood” score of ALAM *et al.* The undersigned submits that this is not the case. To the contrary, the similarity score in REGISTER *et al.* is in fact a plurality of scores that reflect associations of a plurality of categories to the parsed input text. See, *e.g.*, column 10, line 31 *et seq.* of REGISTER *et al.* This is very different from the claimed confidence value, which is a single value associated with a single classification.

In an effort to expedite prosecution, the Applicants have amended independent claims 1 and 17 to more clearly define Applicants’ claimed subject matter. Both claims now recite, “wherein the threshold is adjustable to match a desired confidence value to allow transition from a state where manual routing is favored to a state that favors automatic routing.” As discussed above in considerable detail, none of the cited prior art teaches or suggests, alone or in combination, Applicants’ claimed subject matter. The further clarifying language added to claims 1 and 17 further distinguishes over the cited art.

For at least the reasons set forth above, all of the pending claims are submitted to be in condition for allowance. Thus, Applicants respectfully request withdrawal of all rejections and timely allowance of all of the pending claims.

Applicants note the status of the present application as being an after final rejection and with respect to such status believes that there is a clear basis for the entry of the present amendment consistent with 37 C.F.R. 1.116. Applicants note amendments after

final are not entered as a matter of right, however, Applicants submit that the amendment made to the pending claims do not raise any new issues requiring further search or consideration. It is also submitted that the present amendment does not raise the question of new matter. Moreover, the present amendment clearly places the present application in condition for allowance.

Accordingly, Applicants respectfully request entry of the present amendment in accordance with the provisions of 37 C.F.R. 1.116, reconsideration and withdrawal of the outstanding rejections, and indication of the allowability of the claims pending herein.

#### SUMMARY AND CONCLUSION

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so. Applicants have amended claims 1, 9 and 17 to clarify Applicants' claimed invention. Applicants have added new claims 19-25 to afford them a scope of protection commensurate with various aspects of their invention. The Applicants have pointed out significant and substantial shortcomings of the references relied upon by the Examiner with respect to the pending claims. The Applicants have further discussed the explicitly recited features of Applicants' claims and have noted the shortcomings of the relied upon references with respect thereto. Accordingly, Applicants have provided a clear evidentiary basis supporting the patentability of all the claims in the present application and respectfully request an indication to such effect in due course.

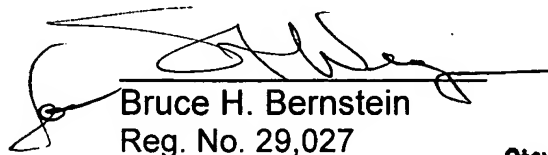
Any amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

P21834.A06

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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